

Arbutin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Arbutin

Catalog No.: CFN99550

Cas No.: 497-76-7

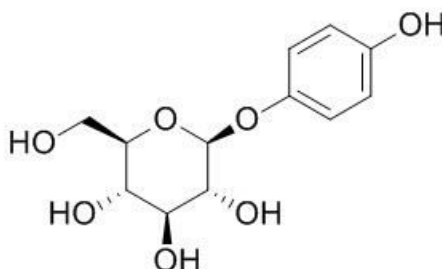
Purity: >=98%

M.F: C₁₂H₁₆O₇

M.W: 272.26

Physical Description: White powder

Synonyms: Hydroquinone-beta-D-glucopyranoside.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Cosmetic research;
5. Intermediates & Fine Chemicals;
6. Others.

[Source]

The leaves of *Arctostaphylos uvaursi*.

[Biological Activity or Inhibitors]

Arbutin, a naturally occurring beta-D-glucopyranoside of hydroquinone, is effective in the topical treatment of various cutaneous hyperpigmentations characterized by hyperactive melanocyte function, the depigmenting mechanism of arbutin in humans involves inhibition of melanosomal tyrosinase activity, rather than suppression of the expression and synthesis of tyrosinase.^[1]

Arbutin has been used as a whitening agent in cosmetic products, arbutin both inhibits melanin production in B16 cells induced with alpha-MSH and decreases tyrosinase activity in a cell-free system.^[2]

Arbutin has mutagenicity in mammalian cells after activation by human intestinal bacteria.^[3]

Arbutin has gastroprotective activities.^[4]

Arbutin is an anti-oxidant and a depigmenting agent, also has anti-inflammatory effect, it may be useful for treating the inflammatory and deleterious effects of BV2 microglial cells activation in response to LPS stimulation.^[5]

[Solvent]

Pyridine, Methanol, Ethanol, etc.

[HPLC Method]^[6]

Mobile phase: 0.05 M KH₂PO₄ buffer solution (pH 2.5)-Methanol =99:1 ;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 280 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

- [1] Maeda K, Fukuda M. *J. Pharmacol. Exp. Ther.*, 1996, 276(2):765-9.
- [2] Lim Y J, Lee E H, Tong H K, *et al. Arch. Pharm. Res.*, 2009, 32(3):367-73.
- [3] Blaut M, Braune A, Wunderlich S, *et al. Food Chem. Toxicol.*, 2006, 44(11):1940-7.
- [4] Taha M M E, Salga M S, Ali H M, *et al. J. Ethnopharmacol.*, 2012, 141(1):273-81.
- [5] Lee H J, Kim K W. *Inflamm. Res.*, 2012, 61(8):817-25.
- [6] Huang S C, Lin C C, Huang M C, *et al. J. Food Drug Anal.*, 2004, 12(404):13-8.

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